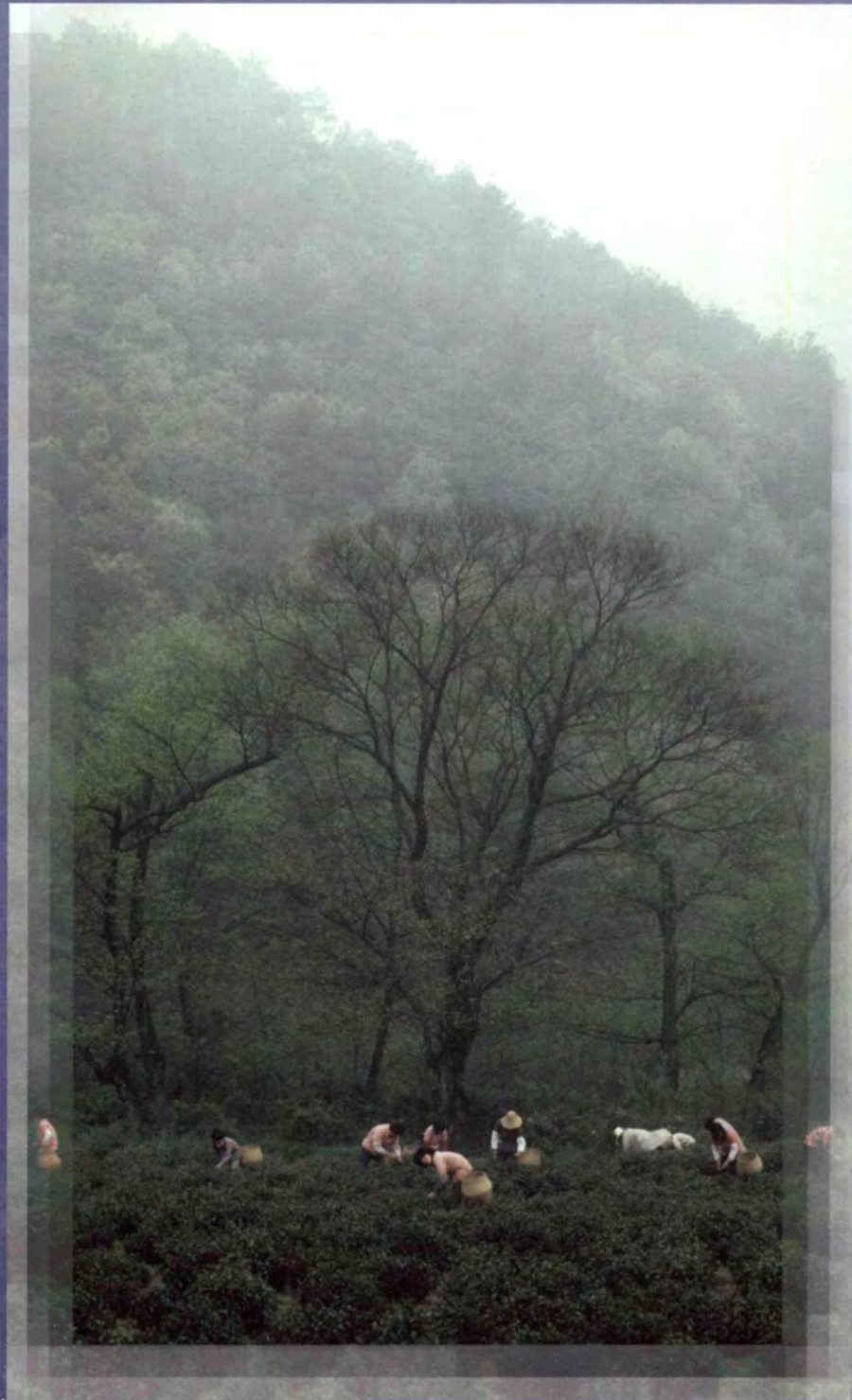


# IDRC

PUTTING PRINCIPLES INTO ACTION  
SUSTAINABLE AND EQUITABLE DEVELOPMENT AT IDRC

*"Sustainable and equitable human activity depends on men and women's control of their own social and economic progress, on equitable access to knowledge, and on an indigenous capability to generate and apply knowledge."*



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*"Sustainable and equitable human activity depends on men and women's control of their own social and economic progress, on equitable access to knowledge, and on an indigenous capability to generate and apply knowledge."*

CORPORATE STRATEGY AND PROGRAM FRAMEWORK, 2000–2005 (2000)

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The International Development Research Centre is a public corporation created by the Parliament of Canada in 1970 to help developing countries use science and technology to find practical, long-term solutions to the social, economic, and environmental problems they face. Support is directed toward developing an indigenous research capacity to sustain policies and technologies developing countries need to build healthier, more equitable, and more prosperous societies.

# SUSTAINABLE AND EQUITABLE DEVELOPMENT PUTTING PRINCIPLES INTO ACTION

## A DECADE OF EFFORTS



IDRC: M. Hibler

In June 1992, at the United Nations Conference on Environment and Development (UNCED) — the Earth Summit — in Rio de Janeiro, Canada designated the International Development Research Centre as a lead organization in implementing Agenda 21, UNCED's global environmental action plan for governments and communities. The announcement recognized "the Centre's proven track record in supporting research in developing countries" and its unique contribution to development over the previous 20 years. It also offered the Centre a challenge well-matched to its own strengths and capabilities, particularly in the areas of research and capacity-building for development.

Following the announcement, IDRC undertook to build on the Earth Summit's ideas. The result was a new program framework for 1993–1996 that ensured that all programs were to be oriented explicitly toward sustainable and equitable development. But as was noted in *IDRC, An Agenda 21 Organization*, published in 1992: "even though IDRC has been active in many of the key areas in Agenda 21, it will not, and should not, try to cover all of them."

### IDRC's Priorities

While IDRC's program framework has gone through several iterations since 1993, most areas of work have evolved from priorities identified at UNCED. The Centre's programing for 2000–2005 concentrates support in three areas of enquiry, anchored in Agenda 21 priorities:

- # *Environment and Natural Resource Management*: The Centre focuses on meeting the needs of current and future generations by recognizing the importance of research that will help people protect the environment and manage natural resources.
- # *Information and Communication Technologies (ICTs) for Development*: Agenda 21 noted that many developing nations had "a general lack of capacity in many areas for the collection and assessment of data; for their transformation into useful information; and for their dissemination." IDRC programing for ICT development is based on the understanding that these technologies have enabling impacts on health, education, governance, employment, resource management, and enterprise.

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- ✦ *Social and Economic Equity:* Agenda 21 recognized that the “economic policies of individual countries and international economic relations both have great relevance to sustainable development.” The Centre supports research on trade policy, poverty alleviation, health, environmental economics, and tobacco control, among others.

These program areas define broad issues, not single disciplines. IDRC’s experience has shown that the components of complex issues like sustainable development cannot be isolated. Reducing poverty – the ultimate goal – also requires close attention to issues of governance and knowledge generation and application that support social innovation and change.

### The Way Forward

In September 2002, representatives of governments, United Nations agencies, multilateral institutions, the private sector, and other major actors will meet in Johannesburg to review progress since UNCED and identify further actions and priorities. Regardless of the successes lauded or failures deplored at the World Summit on Sustainable Development, it is clear that IDRC has lived up to the mandate conferred upon it a decade ago.

The following pages provide a glimpse of the breadth of support that IDRC provides and the achievements of those – mostly in the South – who have received such support. The examples, grouped according to Agenda 21’s four sections, present only a tiny portion of the Centre’s contribution to research for sustainable and equitable development in the decade since Rio.

These examples represent a way forward as much as a look back. As stated in IDRC’s *Corporate Strategy and Program Framework, 2000–2005* ([www.idrc.ca/cpf](http://www.idrc.ca/cpf)): “The cornerstone of the Centre’s work will be an ever stronger link to the aspirations and needs of the people in the developing countries of the world. Sustainable and equitable human activity depends on men and women’s control of their own social and economic progress, on equitable access to knowledge, and on an indigenous capability to generate and apply knowledge.”



IDRC: D. Sing



IDRC: P. Bennett

## LOOKING BEYOND THE ENVIRONMENT

### *Social and Economic Dimensions (Agenda 21, Section 1)*

For the billions around the world who live in poverty, sustainable development is defined as much by access to decent health care and adequate education, to proper nutrition and a reasonable livelihood, to political power and accountable representation, as by a healthy ecosystem. Implicit in sustainable development is the understanding that social, economic, and environmental factors are inextricably linked and cannot be dealt with effectively in a piecemeal fashion.

To deal with these issues effectively, Agenda 21 talks of the need for more holistic problem-solving and decision-making processes that include a broader public consultation. IDRC's more than 30 years of experience confirms that complex issues such as poverty are not readily reduced to component parts for study. IDRC's approach, therefore, is to help developing-country thinkers and communities determine the problem, then identify what knowledge and which scientific disciplines can best contribute to its solution. Drawing on a broad spectrum of scientific, technical, and indigenous expertise is the key to unraveling the convoluted links that underpin most development problems. In the process, the local capacity to undertake complex, multidimensional research and generate long-term, sustainable solutions is enhanced.

The examples that follow are practical demonstrations of this approach. In recent years, IDRC has emphasized linking the outcomes of research to policymaking processes to extend the benefits of the research we support to a greater number of people.



## BROADENING THE BENEFITS OF TRADE

*"Governments should continue to strive to ... promote an open, nondiscriminatory and equitable multilateral trading system that will enable all countries – in particular, the developing countries – to improve their economic structures and improve the standard of living of their populations through sustained economic development ...."*

AGENDA 21: CHAPTER 2. INTERNATIONAL COOPERATION TO ACCELERATE DEVELOPMENT IN DEVELOPING COUNTRIES AND RELATED DOMESTIC POLICIES (1992)

*"IDRC will help developing countries deal with the effects of some of the instruments of globalization, notably the rules and codes of the World Trade Organization."*

CORPORATE STRATEGY AND PROGRAM FRAMEWORK, 2000–2005 (2000)

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Many developing countries lack the technical expertise and resources needed to analyze trade issues and develop good negotiating approaches. This lack of information can limit the range of issues and concerns raised by Southern negotiators.

To help Africans better define and articulate their perspectives on trade and economic issues, IDRC has provided long-term support to two economic think tanks: the African Economic Research Consortium (AERC) and the Trade and Industrial Policy Secretariat (TIPS).

When IDRC helped to establish AERC in 1983, African economists were largely left out of decision-making processes that affected their continent. The AERC set out to change this state of affairs by providing an African perspective on the structural adjustment policies of the International Monetary Fund and the World Bank. Today, the Nairobi-based AERC is a multidonor consortium that is the premier African research body in the field of economics. More than 700 students have graduated from its master's program. Its role in enhancing policy research, training, and policy dialogue in Africa continues to grow with the launch of a collaborative PhD program in economics.

[www.aercafrica.org](http://www.aercafrica.org)

TIPS was created in 1996 to help the post-apartheid government in South Africa reform its economy. Its main focus has been on trade policy, industrial strategy, and economic regulation. Working with the national government's Department of Trade and Industry, TIPS staff have helped policymakers develop a clearer framework for antidumping policy, and evaluate their own trade policy and a new competition bill. To enlarge the pool of researchers knowledgeable in trade and policy issues, TIPS also works outside government circles. Formerly a multidonor secretariat hosted by IDRC, TIPS became an independent organization this past year. [www.tips.org.za](http://www.tips.org.za)



IDRC: P. Bennett

## TACKLING POVERTY

*"A specific antipoverty strategy is one of the conditions for ensuring sustainable development."*

AGENDA 21: CHAPTER 3. COMBATTING POVERTY (1992)

*"IDRC is pledged to the generation and use of knowledge in ways that alleviate poverty and improve people's lives."*

CORPORATE STRATEGY AND PROGRAM FRAMEWORK, 2000–2005 (2000)

The Philippine province of Palawan, a narrow archipelago of 1 700 islands, is breathtakingly beautiful — and poor. In 1999, provincial officials turned to researchers at the Philippine Institute for Development Studies for help in determining the underlying causes of poverty. The approach recommended was a community-based poverty monitoring system (CBMS) that concentrates on poverty at the household level. Information collected gives details about local problems and needs, and allows officials to better tailor their interventions to meet those needs. It also enables them to gauge the effectiveness of programs and projects. Poverty monitoring is at the core of IDRC's Micro Impacts of Macroeconomic and Adjustment Policies (MIMAP) program initiative.

An important aspect of the Palawan study, says Celia M. Reyes, MIMAP-Philippines Team Leader, is the use of geographic information systems (GIS) to produce maps that allow planners to compare villages and municipalities. Using the data gathered through the CBMS and spatial analysis of indicators through GIS, for instance, the Provincial Planning and Development Office published Palawan's first *Human Development Report* in 2001. Palawan has now adopted CBMS as part of its annual planning exercise.

The challenge for MIMAP is to share this experience with other provinces. That process appears to be gathering momentum: Dr Reyes is now assisting the National Anti-Poverty Commission and the Department of Interior and Local

Government to adapt and replicate CBMS throughout the Philippines.

Globally, MIMAP has grown into a network covering 12 countries in Asia and Africa. MIMAP's poverty-monitoring teams met, for the first time, in Rabat, Morocco in January 2002 to share insights and experiences. [www.mimap.org](http://www.mimap.org)



IDRC: D. Mowbray



## IMPROVE THE ENVIRONMENT, IMPROVE HUMAN HEALTH

*"Health ultimately depends on the ability to manage successfully the interaction between the physical, spiritual, biological and economic/social environment."*

AGENDA 21: CHAPTER 6. PROTECTING AND PROMOTING HUMAN HEALTH CONDITIONS  
(1992)

*"IDRC will support research to help developing countries deliver public services, namely health and education, in ways that are more effective, equitable, and financially sustainable."*

CORPORATE STRATEGY AND PROGRAM FRAMEWORK, 2000-2005 (2000)

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For most of its history, the town of Buyo has been an isolated backwater in the humid equatorial forests of southwestern Côte d'Ivoire. In the late 1960s, the national government initiated a development scheme to tap the region's fertile soils. But it wasn't until the 1980s when a hydroelectric dam was built on the Sassandra River at Buyo that development took off.

Buyo's economic development has dramatically changed the way people interact with their surrounding environment. As the forest cover has thinned, rainfall has dropped and biodiversity has dwindled. The heavy use and misuse of fertilizers and pesticides has polluted Lake Buyo and its surrounding watershed. The lack of sanitation and waste disposal facilities has further compromised water quality. Water-borne diseases and respiratory ailments are on the rise.

To curb the mounting health problems, Ivorian researchers have adopted an "ecosystem approach to human health." The idea is to find ways of managing the local environment to improve its health and the health of the people who live in it. IDRC has played a leading role in promoting ecosystem approaches to human health.

In Buyo, local people are working in close collaboration with a team of experts from the health, social, and natural sciences to define priorities and establish a research agenda. Researchers will also examine the differing health effects of resource use on men, women, and children.

Once the analysis is completed, the community will have a clearer picture of the factors affecting their health. They can then make informed decisions about how best to protect themselves and their environment. [www.idrc.ca/ecohealth](http://www.idrc.ca/ecohealth)



IDRC: N. McKee



## CITIES FEEDING PEOPLE

*"The overall human settlement objective is to improve the social, economic and environmental quality of human settlements and the living and working environments of all people, in particular the urban and rural poor."*

AGENDA 21: CHAPTER 7. PROMOTING SUSTAINABLE HUMAN SETTLEMENT DEVELOPMENT (1992)

*"Other research interests include land degradation, soil productivity, urban agriculture, community resource management, and the preservation of biodiversity."*

CORPORATE STRATEGY AND PROGRAM FRAMEWORK, 2000–2005 (2000)



IDRC: P Bennett

In Amman, Jordan, gardens are sprouting in the most unlikely places. In a densely populated Palestinian refugee camp, fruit, vegetables, and herbs grow between tightly packed concrete houses. Across town in a more upscale neighbourhood, one family has transformed a plot outside its apartment building into a mini-farm. While such practices have been common in Latin America and Africa for decades, urban agriculture within a bustling Middle Eastern city is a relative rarity. Amman, home to 31 percent of the country's population, is one of the first to embrace urban agriculture: about one in six households cultivates gardens and raises livestock.

With support from IDRC, the Jordan Department of Statistics conducted a multifaceted survey — the first of its kind in Jordan — to determine the extent of urban agriculture and identify main bottlenecks in the way of its development. The project surveyed 1 350 households in Amman and estimated that 50 000 households — rich and poor — practice urban agriculture, devoting as much as 15 percent of their land to gardens.

The survey was designed to influence government policies to strengthen urban agriculture, recognizing that growing food in the city may help ensure food security in water scarce, rapidly urbanizing Middle Eastern countries. Urban farming can also provide nutritious, affordable food for the poor. Initial recommendations propose that policies be developed to govern pesticide and fertilizer use, to develop standards for safely reusing gray water from showers, kitchens, and laundry facilities, and to provide credit to urban farmers.

[www.idrc.ca/cfp](http://www.idrc.ca/cfp)

### Joint Ventures

IDRC believes that one of the most effective ways to achieve change is through collaboration. Research networks, by definition collaborative ventures, have long been a hallmark of the Centre's approach to development. But following UNCED, IDRC established a new mechanism for joint action — the international secretariat. Secretariats are multidonor research consortia that provide the financial and administrative infrastructure needed to undertake a long-term research agenda on one particular issue. While they are housed at IDRC, secretariats each have steering committees that guide their operations and research directions.

IDRC, in partnership with other donors, has helped create several secretariats to respond to challenges outlined in Agenda 21. The Bellanet International Secretariat grew out of a renewed commitment at the Earth Summit to collaborative approaches to development and a growing awareness of the potential of information and communication technologies (ICTs) to improve international cooperation. Since its inception in 1995, Bellanet has been actively pursuing its mission of helping the international development community to work together more effectively, particularly through the use of ICTs. Bellanet delivers a range of services to enhance collaboration among its partners, including training, developing tools to make it easier to share information, and promoting organizational learning. Through such support, Bellanet aims to help reduce duplication of donor efforts and increase the impact of development investments.

Bellanet is one of six secretariats currently hosted by IDRC.  
[www.bellanet.org](http://www.bellanet.org)





IDRC: P. Bennett



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## BALANCING USE AND CONSERVATION

### *Conservation and Management of Resources for Development (Agenda 21, Section 2)*

Principle 4 of the Rio Declaration on Environment and Development states: "In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it." Simple words perhaps, but not so simple a task. One of the key challenges of sustainable development — and a reason why it is so difficult to achieve — is that so many interrelated, complex factors need to be taken into account. "Environmental protection" itself means preserving and defending. But it also implies supervision, conservation, and good management.

It's a daunting challenge, but one IDRC had accepted from its inception, and remains committed to. For instance, it is the sole focus of one of its three program areas — Environment and Natural Resource Management. It is also a thread linking many other IDRC activities, from research to improve the health of populations to combatting poverty.

The examples that follow show how, in keeping with the complexity of the challenge, IDRC applies a multidisciplinary approach and employs a variety of ways of doing and supporting research. The goal: to find the elusive win-win solutions where knowledge, technology, and policy can help to solve, or at least ameliorate environmental problems, while providing populations with equitable access to the resources they need.

## IMPROVING LIFE ON THE EDGE

*"The priority in combating desertification should be the implementation of preventive measures ... In combating desertification and drought, the participation of local communities, rural organizations, national Governments, non-governmental organizations and international and regional organizations is essential."*

AGENDA 21: CHAPTER 12. MANAGING FRAGILE ECOSYSTEMS: COMBATTING DESERTIFICATION AND DROUGHT (1992)

*"IDRC will continue to support research on local water-demand management and on the fair and equitable use of shared resources. Other research interests include land degradation, soil productivity ... strategies for coping with the effects of climate change ...."*

CORPORATE STRATEGY AND PROGRAM FRAMEWORK, 2000-2005 (2000)

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"Turning adversity into opportunity" is the slogan of the Desert Margins Program, a major collaborative initiative developed by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), headquartered in Andhra Pradesh, India, and funded by IDRC and a consortium of other donors. The adversity: desertification, acknowledged as a major problem at the Earth Summit. More than 120 countries are now signatories to the United Nations Convention to Combat Desertification, which came into force late in 1996. The opportunity? To develop sustainable land and natural resource management practices for the desert margins of sub-Saharan Africa, those lands with barely enough rainfall to support natural vegetation, let alone grow crops. The ultimate goal is to increase food security and reduce poverty by halting or reversing desert encroachment.



IDRC: N. McKee

From the start, the program — through which multidisciplinary teams of scientists work on targeted issues in close association with national, regional, and international programs, nongovernmental organizations (NGOs), and local communities — has blended natural sciences and socioeconomic research. It has also tapped the deep pool of knowledge held by farmers and nomads who, over millennia, have fine-tuned their survival to the vagaries of these lands. IDRC supported national activities in three of the nine participating countries: Botswana, Burkina Faso, and Kenya. One of the products from work with pastoralists in the deserts of northern Kenya is *Indigenous Knowledge: A Resource Kit for Sustainable Development Researchers in Dryland Africa* ([www.idrc.ca/plaw/11e-IK.html](http://www.idrc.ca/plaw/11e-IK.html)), which outlines participatory methods of documenting indigenous knowledge. [www.icrisat.org/text/partnerships/dmp/dmp.htm](http://www.icrisat.org/text/partnerships/dmp/dmp.htm)



## HARBINGERS OF OVERUSE

*"Hence, the proper management of mountain resources and socioeconomic development of the people deserve immediate attention."*

AGENDA 21: CHAPTER 13. MANAGING FRAGILE ECOSYSTEMS: SUSTAINABLE MOUNTAIN DEVELOPMENT (1992)

*"IDRC will support research to improve the lives of poor and marginalized groups living mainly in the uplands and coastal areas. Research will look at better ways to manage the fragile resource base ...."*

CORPORATE STRATEGY AND PROGRAM FRAMEWORK, 2000–2005 (2000)

Mountains are the planet's "canary in the coal mine," says Dr Hans Schreier of the Institute for Resources and Environment (IRE) at the University of British Columbia: what happens in the mountains is an early indication of what's in store for the entire planet. This is particularly true for water, which most often originates in the mountains. Land use activities and climate change in the highlands can also affect large populations in the lowlands. This is certainly the case for the Hindu Kush-Himalaya watershed: more than 10 years of research has shown that land use in the Jhikhu River valley in Nepal is among the most intensive in the world.

Led by the International Centre for Integrated Mountain Development (ICIMOD)([www.icimod.org](http://www.icimod.org)), with funding from the Swiss Agency for Development and Cooperation and IDRC support, the study showed that the pressure on natural resources can be reduced — and livelihoods improved —

with the introduction of low cost irrigation, water-harvesting techniques, and improved soil fertility management. Native nitrogen-fixing fodder trees have proven successful in stabilizing and improving degraded lands and reducing soil erosion. Considerable success has also been achieved in improving drinking water supplies and creating awareness of the health hazards associated with the excessive use of pesticides. The research is continuing to test strategies for community and farm-based prevention and rehabilitation.

[www.idrc.ca/media/MountainSculptors\\_e.html](http://www.idrc.ca/media/MountainSculptors_e.html)

This project is one of eight IDRC-sponsored watershed studies — four in the Himalayas and four in the Andes — participating in a comparative project, which made extensive use of research collaboration via the Internet. In early 2002, IRE produced a hypermedia CD-ROM for each watershed, in addition to a comparative CD-ROM: a fitting contribution to the International Year of the Mountains. Developed in collaboration with national teams and with IDRC support, the CD-ROMs will improve links between the researchers and facilitate distance learning.

[www.ire.ubc.ca/y2k/ire/html/home.htm](http://www.ire.ubc.ca/y2k/ire/html/home.htm)



IDRC: P. Bennett

## SEEDING SOLUTIONS

*"Urgent and decisive action is needed to conserve and maintain genes, species and ecosystems, with a view to the sustainable management and use of biological resources."*

AGENDA 21: CHAPTER 15. CONSERVATION OF BIOLOGICAL DIVERSITY (1992)

*"IDRC will support research to protect local access and rights to biodiversity ...."*

CORPORATE STRATEGY AND PROGRAM FRAMEWORK, 2000–2005 (2000)

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The Convention on Biological Diversity (CBD), signed at the Earth Summit in June 1992, recognized the rich value of living organisms. It also underscored that human survival and development depend upon maintaining and preserving biodiversity on the planet. It was thus fitting that, almost 10 years later, in November 2001, IDRC launched the second publication of the Crucible Group at the Seventh Meeting of the Subsidiary Body on Scientific, Technical and Technological Advice of the CBD in Montreal. *Seeding Solutions, Volume 2: Options for National Laws Governing Control Over Genetic Resources and Biological Innovations* ([www.idrc.ca/booktique](http://www.idrc.ca/booktique)) was the culmination of years of discussion and debate by a wide range of individuals from more than 20 countries who shared a common concern for the conservation and enhancement of plant genetic resources.

Crucible Group II — a large multidisciplinary, multinational forum of people convened in 1998 — undertook to identify and critically assess the range of practical legal policy options open to national policymakers in the areas of domestic access to genetic resources and intellectual property laws. The Crucible process itself was important: it established that valuable consensus is possible, even in a group representing radically diverse perspectives. A wide range of organizations, including IDRC, supported the Crucible Group.  
[www.idrc.ca/media/seeding\\_e.html](http://www.idrc.ca/media/seeding_e.html)

Work is continuing to help countries in the South acquire the analytical and technical capacity to formulate national laws on genetic resources. This is particularly urgent as less developed countries are required by the World Trade Organization's Trade Related Intellectual Property Systems to formulate national laws by the end of 2005. IDRC and the International Plant Genetic Resources Institute (IPGRI) are supporting the establishment of the Genetic Resource Policy Initiative (GRPI), to be launched in mid-2002. A collaborative multidonor organization based at IPGRI in Rome, GRPI will institutionalize the work of the Crucible Group into a more independent, longer term initiative.



IDRC: M. Wassim



## MEETING WATER DEMAND

*"The widespread scarcity, gradual destruction and aggravated pollution of freshwater resources in many world regions ... demand integrated water resources planning and management."*

AGENDA 21: CHAPTER 18. PROTECTION OF THE QUALITY AND SUPPLY OF FRESHWATER RESOURCES: APPLICATION OF INTEGRATED APPROACHES TO THE DEVELOPMENT, MANAGEMENT, AND USES OF WATER RESOURCES (1992)

*"IDRC will support research on water management in North Africa and the Middle East."*

CORPORATE STRATEGY AND PROGRAM FRAMEWORK, 2000-2005 (2000)



IDRC: P. Bennett

Eglal Rached, Director of IDRC's Regional Office for the Middle East and North Africa, writes that "There is a sad irony to the paradox that while the Middle East and North Africa is the most water-scarce area in the world, most of its people work in agriculture — the single heaviest consumer of fresh water on the globe."

Balancing demand and supply in the region will only become more difficult and costly — economically and environmentally — unless conventional supply-oriented approaches are replaced with demand management. This means reducing waste and making every drop serve more purposes, more efficiently. That's the conclusion reached by three decades of IDRC-supported water research around the globe. [www.idrc.ca/water](http://www.idrc.ca/water)

This approach is also the thrust of the Centre-supported Water Demand Management Forum (WDMF), based in Cairo, Egypt. The forum's goals are to increase awareness of decision-makers to water demand management options

and promote feasible alternatives to expensive supply options. It also facilitates networking among decision-makers, researchers, donors, and other development practitioners. The WDMF is currently documenting successful examples of activities in four main areas: wastewater reuse and management; water valuation; public-private partnerships; and decentralized water management. The goal is to help decision-makers formulate appropriate water demand management policies and programs.

Networking and communication through the forum are extensive. For example, in March 2002, 128 participants from eight countries of the Middle East and North Africa attended a Forum on Wastewater Reuse in Rabat, Morocco, cosponsored by IDRC, CIDA, the United Nations Development Programme's Special Unit for Technical Cooperation among Developing Countries, and the United States Agency for International Development. A second forum, on water valuation, will be held in Lebanon at the end of June 2002. [www.idrc.ca/waterdemand](http://www.idrc.ca/waterdemand)

## Working Models of Sustainable Development

Building on Canada's pioneering Model Forest Network, Canada launched the International Model Forest Program at the Earth Summit. Following a 3-year start-up phase at the Canadian Forest Service of Natural Resources Canada, the International Model Forest Network Secretariat (IMFNS) moved to IDRC. It has since grown from an initial 3 sites in 2 countries outside Canada to 19 sites either established or under development in 11 countries. [www.idrc.ca/imfn](http://www.idrc.ca/imfn)

At the heart of model forests are people's relationships with the forest ecosystem. The model forests' trademarks include working on a large scale, with local partners, to define sustainability in locally relevant terms. Specific actions are then taken collaboratively to improve forest resource planning and management. In Chile, for example, various groups disputed and overexploited the resources of the Chiloé archipelago, one of the most biodiverse areas in Latin America and home to many endangered species. When a model forest was established in 1998, a number of traditionally antagonistic groups collaborated, leading to an atmosphere of trust and better understanding of individual interests. Model forest partners also gained a better appreciation of the issues at stake when forest resources are being managed for multiple purposes — and for the benefit of current and future generations. The partnership has now supported some 50 community projects.

[www.idrc.ca/imfn/sites/latina-chile.html](http://www.idrc.ca/imfn/sites/latina-chile.html)

Model forests have also been successful at engaging other institutions to support their work. For instance, the Global Environment Facility unit of the United Nations Development Programme is funding a large 4-year project on Chiloé island that promotes local participation in biodiversity conservation and sustainable resource management. And the Government of Japan has supported the UN Food and Agriculture Organization to lead in developing model forests in four Southeast Asian countries.



IDRC: D. Barbour



IDRC: P. Bennett



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## PUTTING PEOPLE AT THE CENTRE

### *Strengthening the Role of Major Groups (Agenda 21, Section 3)*

Sustainable and equitable development will not be achieved by just a few, working in isolation. It requires everyone's participation. And it must be forged in the real world where economic, social, and political factors converge with geography, climate, and other natural phenomenon.

The determining element between success and failure is people: researchers, decision-makers, policymakers. But more important, local people who best understand the dynamics of their environment, are best placed to influence them, and are most likely to work to create lasting change. After all, they have the most at stake. As Chapter 23 of Agenda 21 states: "Critical to the effective implementation of the objectives, policies, and mechanisms agreed to by governments in all programme areas of Agenda 21 will be the commitment and genuine involvement of all social groups."

From plant breeding to information and communication technologies, IDRC emphasizes a participatory approach to research — one that involves local people in defining problems and finding solutions. By bringing community members, men and women from all walks of life, into the research process, IDRC aims to forge genuine social partnerships for sustainable development.

## BUSINESS E-TIPS FOR RURAL AFRICAN WOMEN

*"To assess, review, revise and implement, where appropriate, curricula and other educational material, with a view to promoting the dissemination to both men and women of gender relevant knowledge ...."*

AGENDA 21, CHAPTER 24: WOMEN IN SUSTAINABLE DEVELOPMENT (1992)

*"Research must take into account the differing impact of change on the lives of men and women. Gender considerations are a key element in pursuing a goal of social and economic equity."*

CORPORATE STRATEGY AND PROGRAM FRAMEWORK, 2000-2005 (2000)

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"How can I make more money?" This is a question that poor, rural women in Nakaseke, Uganda had on their mind. They are finding the answer by using a computer.

In 1998, IDRC supported the establishment of a multipurpose community telecentre in Nakaseke — a place where people can go to use telephones or computers, access the Internet, or send email. It proved popular with the community, but not with rural women who thought of computers as a tool only for people with schooling.

[www.idrc.ca/acacia/acacia\\_e.htm](http://www.idrc.ca/acacia/acacia_e.htm)



IWTC

To bridge this digital divide, IDRC supported a project by the International Women's Tribune Centre to develop content relevant to women's needs. Through group discussions, the researchers learned that one of rural women's pressing problems was finding ways to generate additional income for themselves and their families. The tool that would provide this information had to be simple, and had to speak to them in their own language. The result was a CD-ROM, *Rural Women in Africa: Ideas for Earning Money*, featuring stories from other women in the region who had successfully started small businesses, as well as practical business information.

The "computer book," as the women call the CD-ROM, is narrated in Luganda, bypassing the need for reading skills. The program runs on basic computer systems and is very easy to use: sound, images, and drawings coach users on how to point and click their way through the program. It has proven so popular — and so relevant to the women's lives — that women now line-up at the telecentre to use the computers. As Anastasia, a 70-year-old farmer who was one of the first users explains: "The computer book shows us how to use what you have [to make money]." Moreover, the women have decided to form an association, the Nakaseke Women's Development Association, and are setting up a Web site to sell handicrafts over the Internet.

The CD-ROM, which has also been translated into English, was launched in October 2001. Other language versions are planned. [www.iwtc.org](http://www.iwtc.org)



## YOUTH TEST THE WATERS

*"The involvement of today's youth in environment and development decision-making and in the implementation of programmes is critical to the long-term success of Agenda 21."*

AGENDA 21: CHAPTER 25. CHILDREN AND YOUTH IN SUSTAINABLE DEVELOPMENT (1992)

*"By supporting academic study and offering opportunities for hands-on experience, we are helping promote understanding of development issues with a new generation."*

CORPORATE STRATEGY AND PROGRAM FRAMEWORK, 2000-2005 (2000)

In Mexico, students in the State of Morelos have provided farmers with the proof they need to lobby tanneries and authorities about pollution of the Cuautla and Ayala rivers, used for irrigation. Simple and inexpensive water-quality tests, performed by the students in collaboration with the Mexican Institute of Water Technology (IMTA), have shown that an upstream tannery and factory are indeed contaminating water. Based on the test results, students, IMTA scientists, and farmers are now lobbying the factories to improve their practices, and State authorities to enforce existing regulations.



IDRC: D. Mowbray

The Mexican students are one of more than 90 teams from schools in Canada, Africa, Asia, Latin America, and Europe who have learned how to use a series of simple and inexpensive water-quality tests to detect chemical and microbial pollution in local water samples. All are participating in AQUAtox 2000, a program launched by IDRC in 1998 to help school children understand the importance of protecting water resources in their communities and in the world.

The tests, which require only basic equipment and readily available supplies, were originally standardized and validated for use in the developing world by Watertox. This international network of water quality laboratories, also funded by IDRC, worked in close collaboration with scientists from Environment Canada. The tests comprise

four bioassays — experiments that involve exposing small, living organisms (for example, lettuce seeds or onion bulbs) to water samples. The results are easily visible and unambiguous.

By providing people with the tools to measure water quality, AQUAtox is raising international awareness of the hazards of contaminated water, and enabling citizens to make more informed decisions about their health. IDRC is now working to extend the popular program's reach. For example, in September 2001, Environment Canada's Biosphere, in Montréal, officially became the coordinating body for all AQUAtox activities related to Canadian schools. [www.idrc.ca/aquatox](http://www.idrc.ca/aquatox)

## STAKING A CLAIM IN CAMBODIA

*"National and international efforts to implement environmentally sound and sustainable development should recognize, accommodate, promote and strengthen the role of indigenous people and their communities."*

AGENDA 21: CHAPTER 26. STRENGTHENING THE ROLE OF INDIGENOUS PEOPLES (1992)

*"IDRC will support research to improve the lives of poor and marginalized groups .... Research will look at better ways to manage the fragile resource base and to solve disputes over resource use."*

CORPORATE STRATEGY AND PROGRAM FRAMEWORK, 2000–2005 (2000)

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In the secluded forests of Ratanakiri province in northeast Cambodia, local indigenous peoples, known as Highlanders, have lived a traditional and sustainable lifestyle for centuries — relying on the forest for sources of food, fuel, medicine, building materials, and more. However, over the past 15 years, their livelihood — and the resources that support it — has come under threat as settlers, loggers, and entrepreneurs have started clearing the forest.

In 1997, IDRC, in collaboration with the Cambodia Area Rehabilitation and Regeneration Project funded by the United Nations Development Programme, supported a Cambodian research team that worked with Highlanders to map forest resources and document traditional knowledge. The research proved that traditions surrounding villagers' livelihoods were founded on sound environmental principles. For example, Highlanders refused to cut any trees in areas they identified as "spirit forests" — parts of the forest, researchers discovered, that would not regenerate if cut.

The research team also worked with Highlanders to develop a new, community-based plan for managing Yeak Lom lake, a jewel-like lake surrounded by 300 hectares of protected forest. The management plan was so successful at reversing environmental degradation that the provincial government granted the Highlanders an unprecedented 25-year communal land lease in 1998. This lease means the land is theirs to manage according to their rules and regulations. The project's results have also had an impact on national policy, helping to reverse the government's decision to allow a palm oil company the right to clear 20 000 hectares of forest in Ratanakiri. The results are also helping to shape new laws which recognize traditional forms of forest tenure.

[www.idrc.ca/reports/read\\_article\\_english.cfm?article\\_num=910](http://www.idrc.ca/reports/read_article_english.cfm?article_num=910)



IDRC: L. Waldick



## FARMERS AS RESEARCHERS

*"A farmer-centred approach is key to the attainment of sustainability in both developed and developing countries."*

AGENDA 21: CHAPTER 32. STRENGTHENING THE ROLE OF FARMERS (1992)

*"The complexity of environment and natural resource management demands research to help achieve ... local management and control of biodiversity."*

CORPORATE STRATEGY AND PROGRAM FRAMEWORK, 2000–2005 (2000)

In Nepal, a farmer succeeded in crossing a variety of wild rice (*Oryza rufipogon*) with a popular upland variety — something scientists in Nepal had been unable to do. She had received training in plant-breeding techniques from her husband,

who, in turn had been trained as part of an IDRC-supported project. Field trials of her new variety by researchers and local farmers look promising: the plant is growing well, produces viable seed, and is very well adapted to local conditions. This result has boosted the confidence of farmers in their knowledge and skills. They are now working on breeding sponge gourd and wheat varieties.

In Oaxaca, Mexico, researchers and farmers have joined forces to conserve the biodiversity of maize grown in the region: Oaxaca is home to more than 150 varieties of corn. Farmers

traditionally plant many local varieties to take advantage of different traits, such as drought resistance or higher yields. Men and women also prefer different varieties, for different reasons — cooking qualities, for instance, or ease of preparation. Both agree, however, that local varieties have numerous advantages compared to introduced cultivars. To help farmers conserve and improve local varieties, researchers from the International Maize and Wheat Improvement Centre (CIMMYT) have been training them in plant breeding and seed-management techniques — and bringing the results back to the laboratory and experimental plots. [www.idrc.ca/reports/read\\_article\\_english.cfm?article\\_num=490](http://www.idrc.ca/reports/read_article_english.cfm?article_num=490)

Both these IDRC-supported projects are examples of participatory plant breeding, led by farmers and led by researchers. They share a goal: to help poor, small-scale farmers achieve better results with crops they rely on for food and income generation, and conserve biodiversity. They are also based on the understanding that farmers — men and women — should have a leadership role in technology development. The approach is now also making headway into the international agricultural research system through such large programs as the Systemwide Programme on Participatory Research and Gender Analysis for Technology Development and Institutional Innovation of the Consultative Group on International Agricultural Research, supported by IDRC and a consortium of donors. [www.prgaprogram.org](http://www.prgaprogram.org)

IDRC: D. Barbour



## The Role of Canadian Researchers

A geography professor from Nipissing University in North Bay, Ontario, is finding himself in the unexpected role of ambassador for mangrove forests in Mexico. Mangroves had been little studied when John Kovacs began his research in 1997, despite the rapid loss of the trees throughout the world. Kovacs's interest in the forest in the Nayarit region is matched by that of coastal Mexican communities in Kovacs's work, which shows the unfortunate, unanticipated effects a canal has had on the local ecosystem. Kovacs initiated the work while completing a PhD at the University of Western Ontario: an IDRC research award allowed him to undertake extended field work in the region.

Since 1971, IDRC awards have enabled hundreds of Canadian graduate students to further their research in developing countries — and make valuable contacts. The goal of the program, through which several types of awards are offered, is to promote the growth of Canadian capacity in research on sustainable and equitable development from an international perspective.

While the awards cover the full range of IDRC's research interests, some are more narrowly focused on Agenda 21 priorities. The Bentley Fellowship — Forage Crops in Sustainably Managed Agroecosystems, for instance, enables Canadian graduate students to experiment directly in farmers' fields in developing countries. The John G. Bene Fellowship in Community Forestry focuses on the relationship between communities and forest resources. As Gail Hochachka, 2000 Bene fellow, reported after her study of a mangrove forest in El Salvador: "The skills I have gained through such research are timely and necessary in a world that is conscientiously inquiring into how we can curb the current ecological crisis."

IDRC also offers a number of awards to developing-country scholars. The full list is available on IDRC's Web site.  
[www.idrc.ca/awards](http://www.idrc.ca/awards)



Peter May



IDRC: C. Thompson



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## MAKING CHANGE HAPPEN

### *Means of Implementation (Agenda 21, Section 4)*

The lofty goals of Agenda 21 called for an equally high infusion of financial resources, along with better mechanisms for delivering these investments. But the Government of Canada's singling out of IDRC, with its expertise and experience, recognized that successful implementation also turned on people and their empowerment. The Rio Declaration, which placed people "at the centre of concerns for sustainable development" echoes one of the Centre's founding principles, namely that for societies to build their own futures, they must make their own decisions about development. And to make these decisions, people need the right tools and resources.

For more than 30 years, IDRC has strived to equip people in the South with tools for change. In building a world based on the twin principles of sustainable and equitable development, the tools include technologies, new sources of information, and ways to build capacity. Agenda 21 cited these among the key prerequisites for meeting sustainable development goals and they figure as critical elements of IDRC's research program, as shown by the following projects. The projects — all current initiatives — also underscore how IDRC has worked to transform Agenda 21's blueprint for the future into action and achievement in the present.

## WASTE NOT, WANT NOT

*"New and efficient technologies will be essential to ... achieve sustainable development, sustain the world's economy, protect the environment, and alleviate poverty and human suffering."*

AGENDA 21: CHAPTER 34. TRANSFER OF ENVIRONMENTALLY-SOUND TECHNOLOGY, COOPERATION, AND CAPACITY-BUILDING (1992)

*"IDRC will foster and support the production, dissemination, and application of research results leading to policies and technologies that enhance the lives of people in developing countries."*

CORPORATE STRATEGY AND PROGRAM FRAMEWORK, 2000–2005 (2000)

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A typhoid epidemic hit Dakar, Senegal, in 1987, causing serious illness among 400 residents. A later study showed that those afflicted had eaten vegetables contaminated by "dirty water."

With shortages of fresh water in Dakar, urban gardeners have increasingly been irrigating their plots with insufficiently treated or raw wastewater. To eliminate the public health hazards of this practice, an IDRC-supported project is using aquatic plants to treat wastewater. Water lettuce improves the treatment process in several ways, such as filtering out solids and limiting algae growth. The water can then be reused in market gardens. In Castor, a neighbourhood on the outskirts of Dakar, community members involved in the project are growing a

cornucopia of fruit and vegetables — from hot peppers and papayas to okra and onions. Not only do the gardens provide a source of food, they also generate income for the growers who sell the produce.

This project is one of several that are exploring the use of simple technologies to treat household wastewater in urban areas. Research in the West Bank in Jordan has looked at the purifying effects of duckweed, while another project is improving the design of a small-scale filters for gray water — the water from sinks, showers, and laundry tubs. Through water reuse, farming in the city can produce affordable, nutritious, and safe food for the urban poor.

[www.idrc.ca/cfp/facts50\\_e.html](http://www.idrc.ca/cfp/facts50_e.html)



IDRC: L. Mougeot



## COASTAL CLEAN-UP

*"One role of the sciences should be to provide information to better enable formulation and selection of environment and development policies in the decision-making process."*

AGENDA 21: CHAPTER 35. SCIENCE FOR SUSTAINABLE DEVELOPMENT (1992)

*"IDRC is pledged to the generation and use of knowledge in ways that alleviate poverty and improve people's lives."*

CORPORATE STRATEGY AND PROGRAM FRAMEWORK, 2000–2005 (2000)

On 26 July 1832, the HMS Beagle dropped anchor in the estuary of the Rio de la Plata in Uruguay. On board was Charles Darwin, who wrote of being "surrounded by numerous seals and penguins" and a sea luminous with phosphorescence. Today, the scene in the 300 kilometre wide estuary — the largest in South America — is much different. With most of Uruguay's 3.3 million people living within 100 kilometres of the coast, the estuary suffers from a host of environmental problems. Human activity is contributing to pollution, erosion, and sedimentation. Both small-scale fishers and inshore industrial ships have seen their fish harvests drop. Not surprisingly, the deteriorating ecosystem is affecting both the local population and the tourism industry.

Researchers from Uruguay and Canada, however, are pointing to ways to manage the estuary and conserve its valuable resources. The researchers make up a "virtual institution" working on an initiative known as EcoPlata, launched by IDRC in 1994. Through collaborative research, EcoPlata has generated a wealth of data on many aspects of the Rio de la Plata system and initiated several pilot projects. The work is directed at developing sound management practices for the coastal zone that involve government institutions, the scientific community, and the public. An important step toward this goal was taken in May 2001 with the creation of a special commission by the Uruguayan government to address problems in the Rio de la Plata coastal area. EcoPlata serves as the commission's technical secretariat. [www.ecoplata.org.uy/indexe.html](http://www.ecoplata.org.uy/indexe.html)

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CIDA: R. Lemoyne



## ENVIRONMENTAL ECONOMICS IN ASIA

*"A fundamental goal of capacity-building is to enhance the ability to evaluate and address the critical questions related to policy choices and modes of implementation among development options, based on an understanding of environmental potentials and limits and of needs as perceived by the people ...."*

AGENDA 21: CHAPTER 37. NATIONAL MECHANISMS AND INTERNATIONAL COOPERATION FOR CAPACITY- BUILDING IN DEVELOPING COUNTRIES (1992)

*"To reduce the high social and economic costs of widespread environmental damage, IDRC will support research geared to developing economic and other tools for improving environmental management and health."*

CORPORATE STRATEGY AND PROGRAM FRAMEWORK, 2000–2005 (2000)

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"We went into the conference thinking it was about the environment. We came out realizing it was about economics." So concluded Maurice Strong at the end of the Earth Summit, which he headed as its Secretary-General. His remark later found practical expression in the creation of the Economy and Environment Program for Southeast Asia (EEPSEA) by IDRC in 1993. EEPSEA supports training and research in environmental and resource economics in 10 Asian countries. Its goal is to strengthen local capacity for the economic analysis of environmental problems so that researchers can provide sound advice to policymakers. In the Philippines, for example, this has meant that research on households' willingness to pay for water and on the industrial use of groundwater contributed to changes in water policy in Manila. At a regional level, environment ministers of member countries in the Association of Southeast Asian Nations (ASEAN) adopted a land-clearing policy that aimed to reduce forest burning. This came after an EEPSEA study showed almost US \$4.5 billion in damages from fires and haze in Indonesia in 1997.

EEPSEA also ushered in a new way of "doing business" at IDRC. It was the Centre's first Secretariat, a mechanism that pools funding from several donors in a collective effort to support research.

[www.eepsea.org](http://www.eepsea.org)



CIDA: R. Lemoyne



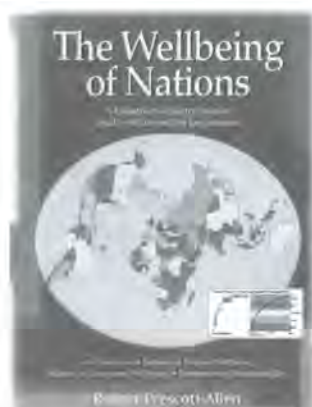
## STATISTICS OF SUSTAINABILITY

*"Commonly used indicators such as gross national product and measurements of individual resources or pollution flows do not provide adequate indications of sustainability."*

AGENDA 21: CHAPTER 40. INFORMATION FOR DECISION-MAKING (1992)

*"[Factors have] lead to fundamental changes in the relationship between people and resources — changes that need to be understood and managed."*

CORPORATE STRATEGY AND PROGRAM FRAMEWORK, 2000–2005 (2000)



Gross domestic product. Debt-servicing ratio. Balance of payments. A country's progress, or lack thereof, is usually defined by these terms. Yet they fail to take into account how nations deal with human and environmental health — both essential elements of development.

This is the aim of the Wellbeing Assessment, a unique method of measuring human and ecosystem wellbeing developed with the support of IDRC and the World Conservation Union.

The new tool gives equal weight to people and the environment through calculations based on

a range of indicators. These include health, knowledge, freedom, equity, and security, as well as land, air, water, and plant diversity. Together, they present a more complete picture of "the state of the nation" than economic statistics. The Wellbeing Assessment also enables individual communities to conduct their own evaluation of their population and environment and to improve conditions without further destroying the ecosystem.

The contributions of several researchers over the last decade were key to the development of the methodology and its testing in Canada and countries in the South. Robert Prescott-Allen, a consultant on sustainable development based in Victoria, Canada, was the principal developer of the Wellbeing Assessment. The results of his survey of 180 countries are presented in *The Wellbeing of Nations*, copublished this year by IDRC and Island Press. "No country knows how to be green without going into the red," says Prescott-Allen on the difficulties of achieving a balance between human and environmental concerns. "Nations with a high standard of living impose excessive strains on the environment and the ones with low demands on the ecosystem are trapped in poverty.

[www.idrc.ca/acb/showdetl.cfm?&Product\\_ID=608&DID=6](http://www.idrc.ca/acb/showdetl.cfm?&Product_ID=608&DID=6)

*"Sustainable development is 'development which meets the needs of the present without compromising the ability of future generations to meet their own needs.' "*

OUR COMMON FUTURE: REPORT OF THE WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT (1987)

*"Sustainable and equitable development gives overriding priority to meeting the basic needs of the world's poor; it emphasizes social equality among all peoples now, and responsibility to future generations."*

MEETING THE GLOBAL CHALLENGE: THEMES AND PROGRAMS OF THE INTERNATIONAL DEVELOPMENT RESEARCH CENTRE (1993)

*"Sustainable and equitable human activity depends on men and women's control of their own social and economic progress, on equitable access to knowledge, and on an indigenous capability to generate and apply knowledge."*

CORPORATE STRATEGY AND PROGRAM FRAMEWORK, 2000–2005 (2000)



## EQUITY — THE LASTING MESSAGE FROM RIO



The United Nations Conference on Environment and Development (UNCED) — the Earth Summit, held in Rio de Janeiro in 1992 — reaffirmed the plain truth that human well-being and healthy ecosystems are inextricably linked. The Rio Declaration and Agenda 21, along with the Statement of Forest Principles, focus on equity and popular participation as essential elements in balancing human development with environmental protection. The Rio Declaration properly put human beings “at the centre of concerns for sustainable development.”

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In fact, UNCED's concern with equity was emphasized throughout its proceedings. The Declaration itself asserted “the goal of establishing a new and equitable global partnership,” and declared as a matter of principle: “The special situation and needs of developing countries, particularly the least developed and those most environmentally vulnerable, shall be given special priority.”

This was the lasting message from Rio: the obligation to place equity at the core of any true definition of sustainable development. In the past 10 years, we have learned that development is not sustainable if it is not equitable, and certainly not equitable if not sustainable.

These same truths have informed IDRC's own approaches. Now, more than ever, the Centre collaborates in development research that is both multidisciplinary and policy-relevant. Our programs, by design and execution, reach across specialties to discover and exploit new knowledge and applications. They are all intended to answer questions that challenge societies in their quest to achieve sustainable and equitable development.

### **Social Innovation, Key to Sustainable Development**

The World Summit on Sustainable Development, scheduled for August 2002 in Johannesburg, will undoubtedly raise more questions on how best to conserve the globe's resources for current and future generations. Achieving true social and equitable development remains a huge challenge: it requires new knowledge and applications, new ideas and policies, and new perspectives and relationships. This application of new knowledge, drawing on new ideas, can be summed up in one phrase: social innovation.

Social innovation provides the context for hundreds of research projects supported by IDRC and carried out by our partners around the world. Social innovation encompasses far more than technical ingenuity: it also includes policy innovations — new ways of informing public thought, eliciting public preferences, and making public choices.



Social innovation means engaging people in the processes of defining how public policy is developed. And it means gathering those affected by any decision, especially the disadvantaged and marginalized, into the conversation. It is in this process of informed debate that research finds its particular role. If development is to prove both sustainable and equitable, then research must attend to the specific circumstances of poor people, in their own communities.

### Relevant Knowledge, Good Governance

Social innovation for development imposes two imperatives. First, it calls for timely, pertinent, and reliable knowledge. Second, it requires creating and maintaining good governance. Where governance is recognizably transparent, participatory, and responsible, it is much more likely to generate productive, fair, and enduring policy.

Satisfying these dual imperatives — relevant knowledge, good governing processes — will challenge even the settled, wealthy democracies. Rich countries, no less than poor, need to search out ways of informing citizens about the choices they face, ways of resolving discord, ways of changing how people understand the impact of their choices on our physical environment.

The preceding pages have provided many examples from Asia, Africa, Latin America, and the Middle East of technological innovation, new forms of institutions and partnerships, and social, political, and attitudinal change — social innovation. They demonstrate how such innovations as strengthening local capacity for economic analysis of environmental problems can inform policy; how considering the health of the environment and of populations together can improve both; how looking to the relationships between communities and their ecosystems and fostering shared management can benefit people, protect resources, and manage conflicts over their use.

Above all, these examples demonstrate how social innovation can advance sustainable and equitable development. And if this research is usually conceived in part to explain the environmental and human implications of policy and action, fundamentally, it represents attempts to develop methods of governing that are better informed, fairer, more open, and more effective.

Whether the result is incremental changes in practice or large-scale changes in policy, in rich and poor countries alike, this social innovation can help people to achieve, as it was said in the Rio Declaration, “a healthy and productive life in harmony with nature.” That is a purpose as urgent and compelling now as it was 10 years ago.

**Maureen O’Neil**

*President*



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<a href="mailto:mag@idrc.ca">mag@idrc.ca</a>	to send a letter to the editor of <i>Reports Online</i>

## Head Office

PO Box 8500, Ottawa, ON, Canada K1G 3H9  
Street address: 250 Albert Street, 5th floor, Ottawa, ON, Canada K1P 6M1

Phone: (+1-613) 236-6163  
Fax: (+1-613) 238-7230  
Email: [info@idrc.ca](mailto:info@idrc.ca)  
Web: [www.idrc.ca](http://www.idrc.ca)

## In Asia

### Regional Office for Southeast and East Asia

Tanglin PO Box 101, Singapore 912404  
Republic of Singapore  
Street address: RELC Building  
30 Orange Grove Road, 7th floor  
Singapore 258352, Republic of Singapore

Phone: (+65) 6235-1344/1576/1865  
Fax: (+65) 6235-1849  
Email: [asro@idrc.org.sg](mailto:asro@idrc.org.sg)  
Web: [www.idrc.org.sg](http://www.idrc.org.sg)

### Regional Office for South Asia

208 Jor Bagh, New Delhi 110 003, India

Phone: (+91-11) 461-9411/12/13  
Fax: (+91-11) 462-2707  
Email: [saro@idrc.org.in](mailto:saro@idrc.org.in)  
Web: [www.idrc.ca/saro](http://www.idrc.ca/saro)

## In Latin America and the Caribbean

### Regional Office for Latin America and the Caribbean

Avenida Brasil 2655, 11300 Montevideo, Uruguay

Phone: (+598-2) 709-0042  
Fax: (+598-2) 708-6776  
Email: [lacroinf@idrc.org.uy](mailto:lacroinf@idrc.org.uy)  
Web: [www.idrc.ca/lacro](http://www.idrc.ca/lacro)

## In Africa

### Regional Office for Eastern and Southern Africa

PO Box 62084, Nairobi, Kenya  
Street address: Liaison House, 2nd and 3rd floors  
State House Avenue, Nairobi, Kenya  
(please address all mail to the IDRC Regional Director)

Phone: (+254-2) 2713-160/1, 2713-273/4  
Fax: (+254-2) 2711-063  
Email: [chunja@idrc.or.ke](mailto:chunja@idrc.or.ke)  
Web: [www.idrc.ca/earo](http://www.idrc.ca/earo)

### Regional Office for the Middle East and North Africa

PO Box 14 Orman, Giza, Dokki, Cairo, Egypt  
Street address: 3 Amman Square, 5th floor  
Dokki, Cairo, Egypt

Phone: (+20-2) 336-7051/52/53/54/57  
Fax: (+20-2) 336-7056  
Email: [skamel@idrc.org.eg](mailto:skamel@idrc.org.eg)  
Web: [www.idrc.ca/cairo](http://www.idrc.ca/cairo)

### Regional Office for West and Central Africa

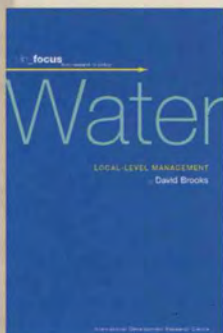
BP 11007, CD Annexe, Dakar, Senegal  
Street address: Avenue Cheikh Anta Diop  
Angle Boulevard de l'Est  
Dakar, Senegal

Phone: (+221) 864-0000, ext. 2074  
Fax: (+221) 825-3255  
Email: [jgerard@idrc.org.sn](mailto:jgerard@idrc.org.sn)

[www.idrc.ca/water](http://www.idrc.ca/water)

# WATER SCARCITY

threatens us all



menacing our well-being,  
jeopardizing our livelihoods, and  
sometimes endangering our lives.

*Water: Local-level Management*, by David Brooks, an IDRC specialist in natural resources, summarizes the results of three decades of IDRC-supported research on water supply.

Focusing on research successes and failures, this booklet presents solid propositions for decision-makers and for researchers; offers a series of clear and pointed recommendations for policy design and future research efforts; presents key resources in the field; and concludes with an eye to the future of water supply.

To order a copy or to obtain more information on this book, as well as other IDRC publications, visit our Web site, [www.idrc.ca/booktique](http://www.idrc.ca/booktique), and our information pyramid on water, [www.idrc.ca/water](http://www.idrc.ca/water).

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